

**Lyme Disease Advisory Committee Meeting
March 15, 2013
Sacramento, California**

Committee members in attendance

Barbara Barsocchini, California Lyme Disease Association (LymeDisease.org)
Karen Chew, Lyme Disease Support Network
Vicki Kramer, PhD, California Department of Public Health (CDPH)
Robert Lane, PhD, University of California, Berkeley
James Miller, PhD, University of California, Los Angeles (via phone)
Scott Morrow, MD, MPH, California Conference of Local Health Officers (via phone)
Christian Parlier, Lyme Disease Support Network
Chindi Peavey, PhD, Mosquito and Vector Control Association of California (MVCAC)
Raphael Stricker, MD, California Medical Association (CMA)

Other attendees

Denise Bonilla, MS, MS, CDPH, Committee Coordinator
Claudia Erickson, MS, CHES, CDPH, Health Educator
Kerry Padgett, PhD, CDPH, Supervising Public Health Biologist
Anne Kjemtrup, DVM, MPVM, PhD, CDPH, Epidemiologist

Approximately 10 additional individuals representing CDPH Vector-Borne Disease Section (VBDS) and the interested public.

I. Roll Call and Opening Comments

The meeting was brought to order by Mr. Parlier at 9:30 a.m.

II. Committee Member Updates

Dr. Lane reported that his collaborative study with the Alameda Co. Vector Control Services District indicated that Alameda County has eight species of *Borrelia* and this is the highest reported borreliat diversity for any geographic region in North America. Dr. Lane's group is finalizing this research and is readying a manuscript for publication. A graduate student is finishing a paper on modeling Lyme disease variables within reservoir birds and their tick populations.

Dr. Peavey has finished gathering information for the MVCAC website with a clickable county map of California that displays contact information for districts that provide tick-borne disease services.

Ms. Barsocchini reported that Lymedisease.org granted funds to 17 medical professionals this year and they continue their outreach and mentoring. The annual Lyme walk will be in San Diego.

Dr. Kramer reported that the CDPH travel budget has decreased despite improvement in the state budget, and thus funding to support travel for LDAC members will be more limited. The hantavirus outbreak at Yosemite National Park last summer involved many staff of the CDPH Infectious Diseases Branch.

Dr. Stricker discussed a paper outlining a new culture-based Lyme disease test by a commercial laboratory in Pennsylvania. The test grows *Borrelia* in a reduced amount of time (1 week). The basic test costs \$600 and provides Yes/No results. It is not covered by most insurance companies. Identification of the strain costs more (\$900).

Committee comments: *Borrelia* spirochetes are hard to culture so the test mentioned by Dr. Stricker may not be able to culture all species. The effect of antibiotics on the test is unknown. Two universities are currently working on further validation of the test. Would cases with this new test qualify as lab reportable? Dr. Kjemtrup responded that the case definition includes a culture positive test and the U.S. Centers for Disease Control and Prevention (CDC) is examining how this new test will fit into the case definition.

III. CDPH Progress Report (Denise Bonilla)

Ms. Bonilla reviewed the tick-borne disease prevention activities of CDPH. For the general public, CDPH tweets and Facebook postings resulted in messages being spread through other health agencies' social media efforts. Ms. Bonilla reviewed VBDS outreach to the medical community including lectures to medical staff and supplying of materials per requests. VBDS continues to provide presentations and educational materials on tick-borne diseases to local vector control agencies and other partners. The LDAC goal matrix was reviewed.

Committee comments:

- Ms. Barsocchini stated that the perception in southern California by physicians is that there is no Lyme disease there and she would like more physician outreach.
 - Dr. Kramer replied that the tick map in progress will help demonstrate that there is some endemicity in southern California which is pertinent for the Lyme disease case definition. The VBDS Ontario office is available to give presentations.
- Dr. Lane suggested adding a bullet point to the goal matrix under Risk Assessment (6-12 months) to “differentiate between *Borrelia burgdorferi* sensu lato species.”

IV. Tick bite prevention occupational health outreach (Claudia Erickson)

Ms. Erickson reviewed the Occupational Health Tick Bite Prevention packet she debuted at the MVCAC Annual meeting as a poster presentation. Local agencies signed up to receive copies. The packet contains a fact sheet, a training video, a workplace poster, and tick identification cards. She is interested in expanding implementation of this packet and then later evaluating the implementation of the program. She is creating a mailing list that will be sent to LDAC committee members so they can add potential groups for packet dissemination.

Committee comments:

- Dr. Lane asked why not evaluate the efficacy of the materials now? Is the number of tick bites experienced by workers decreasing? Ms. Erickson noted that if possible, efficacy will be evaluated.
- Dr. Stricker suggested that this packet tie into the interactive tick collection map.
- Mr. Parlier inquired how CDPH ranks in terms of using social media?
 - Ms. Erickson responded that CDPH is on the cutting edge of using social media for outreach.
- Mr. Parlier asked if Lymedisease.org and CDPH work together in re-tweeting and posting?
 - An audience member remarked that Lymedisease.org retweets CDPH material but tick-borne disease information should be posted more often.

V. *Borrelia miyamotoi* in California (Kerry Padgett)

Dr. Padgett reported on a newly described human relapsing fever group pathogen, *Borrelia miyamotoi*. It is vectored by *Ixodes pacificus* in California and can be found in all stages of these ticks. Potential reservoirs are deer, birds, and small rodents. It was first identified as a pathogen in Russia in 2011. Now there are cases reported from the eastern United States. Symptoms are similar to Lyme borreliosis, but high fever, fatigue and headache are more common. Fever can relapse in 9 day intervals. There is no commercial laboratory test yet and all cases identified have come from research labs using ELISA with the *B. miyamotoi* GlpQ protein. It can be treated with antibiotics but some people show a Jarish-Herxheimer reaction. CDPH has been doing surveillance for *B. miyamotoi* in ticks since 2000. Approximately half of adult ticks testing positive for *Borrelia* were positive for *B. burgdorferi* sensu lato and half have been positive for *B. miyamotoi*. Nymphs tested show a 2.5x higher prevalence infection of *B. burgdorferi* sensu lato than for *B. miyamotoi*.

Committee comments:

- Dr. Lane mentioned that he believes when the infection data are grouped by biotope a different picture may emerge.
- Dr. Stricker stated that the Russian paper shows some cross reactivity in testing for *B. burgdorferi* but the more recent New England Journal of Medicine article did not demonstrate cross-reactivity.

VI. *Borrelia miyamotoi* outreach discussion

Dr. Kramer stated that CDPH plans to develop a general fact sheet targeted towards the public health community and possibly for the general public.

Suggestions for questions to answer in a fact sheet included:

- What are the symptoms of infection with *B. miyamotoi*?
- How do I get tested for this?
- How do I treat this disease?
- Are infected ticks found in my area?

- How do I properly remove a tick?
- How do I prevent getting this disease?

Members of the public questioned whether there were labs working on diagnostic testing for *B. miyamotoi*. Dr. Lane commented that the NIH has probably granted money to a lab for this purpose.

VII. Public Comment Period

- There should be outreach to practitioners other than physicians and outreach messages should be tied to habitats. Occupational health outreach should target search/rescue and the Sheriff's Department. Why is CDPH no longer using the tip to tuck your pants into your socks for tick bite prevention?
 - Ms. Erickson stated that the CDC found this message was not used by the public and in honing their messages to the three most effective methods of tick prevention, chose to emphasize this approach less.
 - Dr. Lane asked if CDPH was using a tip to throw your clothes in the hot drier for 5 minutes and Dr. Kramer responded not at this time.
- An audience member urged more research on a potential tick borne pathogen: *Mitochondria mitochondria*.
- More physician outreach needs to be done for *B. miyamotoi* and Lyme disease. They need to be informed that we have endemic areas in California, how to identify an erythema migrans rash, and what makes a Lyme disease case reportable. Perhaps emails and tweets can be focused towards physicians.
 - Dr. Stricker answered that the interactive map should help physicians determine endemicity.
 - Dr. Kramer responded that *B. miyamotoi* was only recently found to be a human pathogen and CDPH is working on a fact sheet.

Meeting adjourned at 2:45 by Mr. Parlier